

REMARKS

In the above-identified Office Action, the Examiner issued a final rejection of Claims 1-9, 11-19, 30 and 31 under 35 U.S.C. §102, as being fully anticipated by PCT Patent Application No. 92/15651 (Moon). Claims 21-29 were withdrawn from consideration due to an earlier Restriction Requirement.

The rejection of Claims 1-9, 11-19, 30 and 31 is respectfully traversed for the reasons discussed below. A minor informality is being corrected in Claim 30, and new Claims 32 and 33, which are dependent from Claim 1, are being added. Also, to comply with the Examiner's request, Claims 21-29 are being cancelled herein.

The rejection of Claims 1-9, 11-19, 30 and 31 is respectfully traversed because Moon, as well as the other references of record, does not teach or suggest the principal, as described in independent Claims 1 and 11, of using light to indicate that a UV curable tape is substantially cured.

The present invention, as explained in the parent application, provides a UV curable tape with a material that starts to emit light when the tape becomes substantially fully cured. This feature is of significant utility because it facilitates ensuring that the tape is fully cured. When the tape is used with a semiconductor wafer, for example, the tape can be removed without leaving any significant adhesive residue. This, in turn, reduces the cost of, and the length of time needed for, the semiconductor fabrication process.

Moon discloses a process in which light is used to polymerize a mixture. While light is used in this process, the mixture does not function in the same way as the material used in the present invention – to start to emit light when the tape becomes fully cured.

In the Office Action, the Examiner argued that the limitation in Claims 1 and 11, "becomes substantially cured start to emit light" is a product by process limitation. Applicants respectfully disagree.

Claims 1 and 11 set forth specific structural elements and describe how those elements function to achieve the desired result. In particular, Claim 1, which is directed to a UV energy curable tape, describes, among other features, a support layer, a UV energy curable oligomer, and a material that starts to emit optical light of a first type when the tape becomes substantially fully cured. Claim 11 is also directed to a UV energy curable tape and positively sets forth a support layer including a material which starts to emit optical light of a first type when said tape becomes substantially fully cured. These are positive, structural features that describe how the elements of the invention work and how the invention works. Accordingly, limitation that the material starts to emit light when the tape becomes substantially fully cured, should be taken into account when determining the patentability of the claims.

Moreover, it is this limitation that patentably distinguishes the claims from the prior art. In particular, the prior art, including Moon, does not disclose or suggest a UV energy curable tape comprising a material that starts to emit light of a first type when the tape becomes substantially fully cured.

In rejecting the claims, the Examiner in the Office Action argued that Moon, at Page 7, lines 18-21, discloses a material which starts to emit light when the tape is substantially fully cured. This section of Moon describes materials that can be blended with a polymerizable monomer mixture, including, among others, filler, tackifiers, foaming agents, and antioxidants. These materials are not light emitting materials, and clearly these materials do not emit light in the manner described in Claims 1 and 11.

It is noted that Moon, on Page 7, lines 27-30, indicates that the extent of polymerization can be monitored by measuring the refractive index of the adhesive layer. The fact that this layer has a refractive index does not mean that it emits light. To the contrary, the fact that the refractive index of this adhesive layer is measured suggests that the layer is transparent and not light emitting.

Applicants' attorneys have carefully reviewed the Office Action and Moon, and it is respectfully submitted that, in applying Moon, as the Examiner has done, the Examiner is considering photoinitiators as light emitting materials. There is no disclosure in Moon, however, that the photoinitiators described therein are light emitting. The photoinitiators disclosed in Moon react to light to initiate the photopolymerization process. There is no disclosure in Moon that the photoinitiators emit light. In contrast, the materials used in the present invention not only emit light, but also do so in a specific manner – they start to emit light when the tape becomes substantially cured.

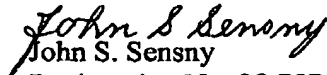
When Claims 1 and 11 are viewed in this light, it is clear that the claims are not anticipated by Moon and, in fact, patentably distinguish over Moon.

The other references of record have been reviewed, and whether these other references are considered individually or in combination, also disclose the above-discussed principal of the present invention.

Because of the differences between Claims 1 and 11 and the prior art, and because of the advantages associated with those differences, Claims 1 and 11 patentably distinguish over the prior art and are allowable. Claims 2-9 and 30-33 are dependent therefrom, and are allowable with Claim 1. Similarly, Claims 12-19 are dependent from Claim 11 and are allowable therewith.

The Examiner is, accordingly, asked to reconsider and to withdraw the rejection of Claims 1-9, 11-19, 30 and 31, and to allow these claims and new Claims 32 and 33. If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,


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